

**AMENDMENT UNDER 37 C.F.R. § 1.111**

U.S. Appln. No. 09/722,306

Attorney Docket Q61090

**REMARKS**

Claims 1-4 are all the claims pending in the application. By this Amendment, Applicant amends claims 2 and 4. Claims 2 and 4 have been amended solely for the purpose of improved readability. Since such amendments are made to correct minor, basic elements, Applicant submits that they do not narrow the scope of the claim and do not raise any Festo implications.

**I. Summary of the Office Action.**

Applicant thanks the Examiner for approving proposed Drawing Correction filed on June 3, 2003. In addition, Applicant thanks the Examiner for withdrawing the previous rejection.

Claims 1 and 3 are objected to for minor informalities and claims 1-4 stand rejected under 102(b).

**II. Preliminary Remarks.**

The Examiner objected to the Abstract of Disclosure for being longer than 150 words. Applicant herein amends the Abstract to conform to the required length. In view of this amendment to the Specification, Applicant respectfully requests the Examiner now to withdraw this objection.

Furthermore, the Examiner objected to claims 1 and 3 because of minor informalities. With respect to claim 1, the Examiner asserts that the limitations “unavailable area” and “available area” are formulated indefinitely as to the meaning of the terms nor does the

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specification supports these limitations with a clear explanation (page 2 of the Office Action).

Applicant respectfully disagrees. The Specification clearly discloses an illustrative, non-limiting, embodiment of the unavailable area and the available are. In this embodiment, a character memory 0801 with at least one circuit pattern previously inputted is the unavailable area and the available area is a character memory 0802 storing a new, currently inputted circuit pattern (Fig. 10; page 24, second full paragraph of the Specification). Therefore, Applicant respectfully requests the Examiner to withdraw this objection to the claim 1.

In addition, the Examiner has objected to claim 3 for a number of informalities (pages 2-3 of the Office Action). Applicant respectfully submits that claim 3 does not have the recited language cited by the Examiner. As such, Applicant believes the Examiner meant claim 4. Applicant has revised claim 4, and respectfully submits that the claim as now presented no longer includes the potential informalities mentioned by the Examiner. Applicant, therefore, respectfully requests the Examiner to withdraw the objections to the claims 3 or 4.

**III. Prior Art Rejection.**

The Examiner rejected claims 1-4, under 35 U.S.C. § 102(b) as being anticipated by USP 5,126,956 to Komiya (hereinafter "Komiya"). Applicant respectfully traverses this rejection and respectfully requests the Examiner to reconsider this rejection in view of the comments, which follow.

Of these claims, only claim 1 is independent. Claim 1 requires:

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a copying means for copying the extracted circuit pattern into said available area.

The Examiner asserts that claim 1 is directed to a ladder circuit editing system and is anticipated by Komiya. The Examiner asserts that Komiya's circuit generator CG is equivalent to the available area as set forth in claim 1 (see page 3 of the Office Action). Applicant respectfully disagrees with the Examiner. Applicant has carefully studied Komiya's discussion of the CG, which is not similar to the available area as set forth in claim 1.

Komiya teaches a method and an apparatus for displaying a ladder diagram to facilitate debugging and maintenance by automatically searching the ladder diagram for relays involved in turning on a particular relay (col. 5, lines 46 to 51). This is done by entering the identification of the desired relay or a memory address storing the state of the relay, which in turn generates a display showing solely the segment of the ladder diagram which includes conditions for turning on a specific relay (col. 5, lines 52 to 58). All program segments can automatically be displayed including conditions for turning on a specific relay (col. 5, line 59 to 62).

Specifically, Komiya teaches a universal display unit 301h with a character generator CG for storing alphanumeric patterns and symbols for displaying ladder diagrams. In addition, display unit 301h has a memory MEM for storing corresponding relationships between relay identifications and location transferred from the table 301f and a picture memory IMM for successively storing items of picture data generated by CG (Fig. 8; col. 7, lines 21 to 47).

When an input device enters a request for display of a ladder diagram, the data processing unit 301m transfers the corresponding relationships from table 301f to MEM of unit 301h. Then

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the processing unit 301m sends the sequence program data such as operation codes RD through WRT from the ROM 301d to the display side in a sequential fashion. Upon receiving the sequence program data, the display controller DPC edits the data into the picture information under the control of an editing program stored within the DPC (Fig. 10; col. 7, lines 48 to 67). The corresponding relationships stored in MEM are used to generate the picture information for the identification display area. All the picture information is stored in the refresh memory RFM.

Thereafter, the display controller DPC reads each item of picture information out of the refresh memory RFM in succession, reads the patterns corresponding to the picture information out of the character generator CG, and stores the patterns in the picture memory IMM. Through these operations, ladder diagram segments are displayed sequentially on the CRT in accordance with the order in which the sequence program was written (col. 8, lines 1 to 12).

Another embodiment of Komiya teaches displaying only the segments constituting the ON conditions of the desired control relay or output relay. First, the user identifies the desired relay, and this information is stored in register RG. Next, one unit of sequence program data is stored in buffer register BFR. Discriminator DIC reads the sequence program data and goes into MEM to read out the relay identification. Next, the identification is delivered to a comparator COM to compare the information stored in the RG with the information outputted by the DIC. If the two agree, then the unit of sequence stored in BFR is converted into a picture and is stored in refresh memory RFM. Based on the picture stored in RFM, CG generates a picture, which is later stored in a picture memory IMM (see col. 8, lines 40 to col. 9, line 55).

However, Komiya teaches MEM for storing the corresponding relationships between

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relay identifications and locations from table 301f in response to a request to display a ladder diagram or in response to a request to display only segments constituting ON conditions of the desired relay. Komiya does not teach or suggest MEM for storing circuit elements of a circuit pattern being input.

In addition, the corresponding relationships stored in MEM are used to generate the picture information for the identification display area. All the picture information is stored in the refresh memory RFM. Thus, Komiya also fails to teach or suggest copying means for copying the extracted circuit pattern into the MEM. After the comparison as acknowledged by the Examiner (page 4 of the Office Action), the extracted patterns are stored in IMM for sequential display and not in MEM. In short, MEM is only used for uploading a table with corresponding relationships used for extraction or comparison and not after extraction. As a result, the reference fails to teach or suggest “copying means for copying the extracted circuit pattern into said available area”.

The Examiner’s reading of “said available area” on memory MEM thus fails to make out a case for anticipation because such reading does not fulfill the requirements for “copying the extracted circuit pattern into said available area.” For at least these reasons, Applicant respectfully submits that independent claim 1 is patentably distinguishable from Komiya. Applicant therefore respectfully requests the Examiner to reconsider and withdraw this rejection of independent claim 1. Also, Applicant respectfully submits that claims 2-4 are allowable at least by virtue of their dependency on claim 1.

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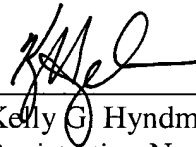
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III. Conclusion and request for telephone interview.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly invited to contact the undersigned attorney at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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